



## Curriculum – Year 10 IT

Year 10 IT	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 1 - (Midway) – 13/05/2024 Summer Term 2
<b>Cambridge National Level 1 / Level 2 IT – J836</b>	<b>R060 - Data manipulation using spreadsheets – (NEA – Internally and externally assessed)</b>			<b>R070 - Using Augmented Reality to present information – (NEA – Internally and externally assessed)</b>		<b>R050 - IT in the digital world – Written exam paper – (1 hour 30 Minutes)</b>
<b>Ethos Links</b>	Character <b>Confidence</b> – (TA4) <b>Creativity</b> – (TA2) Contributing Community  Relationships <b>Routines</b> – (TA1) Recognition Restorative approach			Character Confidence <b>Creativity</b> – (TA2) Contributing <b>Community</b> – (TA1)  Relationships <b>Routines</b> – (TA4) Recognition Restorative approach		Character <b>Confidence</b> – (TA6) Creativity <b>Contributing</b> – (TA3) <b>Community</b> – (TA2)  Relationships Routines Recognition Restorative approach
<b>Learning End Points</b>	Spreadsheets are powerful sophisticated tools that allow businesses to model real life scenarios. By the end of this unit students will be able to effectively plan and design a spreadsheet solution <b>(TA1)</b> .  Create a spreadsheet solution based on the NEA scenario provided by the exam board <b>(TA2)</b> .  They should be competently able to conduct the testing process of the spreadsheet solution <b>(TA3)</b> .  Finally, to conclude this NEA project the students should be able to confidently evaluate the spreadsheet and their personal performance <b>(TA4)</b> .			The students need to understand how smartphones, tablets and other digital devices have changed the way we communicate. Augmented Reality has changed the way information is accessed, viewed, and used. The students will first learn what is Augmented reality <b>(TA1)</b> .  Then they will use specific design tools to design an AR model prototype <b>(TA2)</b> .  Then based on the design they will create the AR model prototype using XR plus <b>(TA3)</b> .  Finally, they will be able to understand the process of how to test and review their final AR prototype <b>(TA4)</b> .		The students will learn about how IT is used in society today. This will be at home, places of work, and out about in real life. The students would have learnt about the design tools used to create an IT system <b>(TA1)</b> .  They would be able to explain how human computer interfaces work in everyday life <b>(TA2)</b> .  They would be able to demonstrate their understanding of how to work with data and carry out sophisticated testing <b>(TA3)</b> .  They should be able demonstrate understanding of cybersecurity and the legislations affiliated with cybercrime <b>(TA4)</b> .  They should develop a good understanding of existing digital communication methods <b>(TA5)</b> .  Finally, there has been a sharp rise in smart devices consisting of internet enabled capabilities. Hence, students should become competent on the Internet of Everything topic <b>(TA6)</b> .
<b>Substantive knowledge</b>	<ul style="list-style-type: none"> <li>Planning and designing the spreadsheet solution <b>(TA1)</b></li> <li>Creating the spreadsheet solution <b>(TA2)</b></li> <li>Testing the spreadsheet solution <b>(TA3)</b></li> <li>Evaluating the spreadsheet solution <b>(TA4)</b>.</li> </ul>			<ul style="list-style-type: none"> <li>Augmented Reality (AR) <b>(TA1)</b></li> <li>Designing and AR model prototype <b>(TA2)</b></li> <li>Creating an AR MODEL prototype <b>(TA3)</b> <ul style="list-style-type: none"> <li>Testing and Reviewing <b>(TA4)</b>.</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>Design tools <b>(TA1)</b></li> <li>The Human Computer Interface (HCI) in everyday life <b>(TA2)</b></li> <li>Data and Testing <b>(TA3)</b></li> <li>Cyber security and legislations <b>(TA4)</b></li> <li>Digital Communications <b>(TA5)</b></li> <li>The Internet of everything (IOE) <b>(TA6)</b>.</li> </ul>

<b><i>Disciplinary knowledge</i></b>	The keys IT skills that the students will develop are planning, designing, creating, testing, and evaluating a spreadsheet model based on a given scenario. In the IT industry, this would be the method that would be used by IT experts. This would allow the IT specialist to remain on track in terms of time management, tasks being allocated appropriately and ensure the IT system (spreadsheet model) meets the needs of the audience and the purpose.	Augmented reality is part of everyday study. IT specialists irrespective of the industry would have encountered AR at some point. The IT specialists must be able to design, create, test and review AR prototype models in real life. These are the exact skills we will be teaching the students to ensure that they are organised and approach any AR task as it would be approached in industry.	An IT specialist who designs an IT system must be able to decompose a client's requirements and make a system to meet their client's needs. The industry-based skills students will learn are how to design HCI to enhance interaction between the end user and the system. This unit will also develop the students understanding of the challenges IT specialists face regarding criminal activity and constraints of designing and implementing an IT system.
<b><i>Key Vocabulary</i></b>	<ul style="list-style-type: none"> <li>• Implementation</li> <li>• Modelling</li> <li>• Formulae</li> <li>• Functions</li> <li>• VLOOKUP</li> <li>• Pivot tables</li> <li>• Macros</li> <li>• Conditional formatting</li> <li>• Data types</li> <li>• Forecasting</li> </ul>	<ul style="list-style-type: none"> <li>• Augmented reality</li> <li>• Maker less AR</li> <li>• Dimensions</li> <li>• Visualisation</li> <li>• Storyboarding</li> <li>• Wireframes</li> <li>• Assets</li> <li>• Audio</li> <li>• Publishing</li> <li>• Scenes</li> </ul>	<ul style="list-style-type: none"> <li>• Planning tools</li> <li>• Human Computer Interface</li> <li>• Data Types</li> <li>• Testing</li> <li>• Distribution Channels</li> <li>• Connectivity</li> <li>• Internet of everything</li> <li>• Malware</li> <li>• Networks</li> <li>• Social engineering</li> </ul>